Browser Automation

Added to Tiki17, based on PhantomJS and CasperJS.

Tiki will remote control a headless browser (PhantomJS), which will open up a whole range of new features. See also: PhantomJS and CasperJS.

Key features

- Store recipes in wiki pages (ex.: a CasperJS plugin) with a "run" or "execute" button
  - Including credentials
  - Ideally, this can be a fairly standard language, and recipes can be shared
- Data is added to Tiki (wiki page, tracker, dynamic variable, etc.)

Potential Use Cases

1.1.1. Functional Testing

- Testing

https://github.com/jcalderonzumba/MinkPhantomJSDriver

On our way to have continuous integration / delivery

1.1.2. Monitoring

- Monitoring
- Compare generated HTML for all *.tiki.org sites between versions (to check for regressions/changes of behavior)

Use case: to know about changes to Tiki code which break stuff

- PhantomJS checks a list of URLs daily
- If HTML changes, an email is sent with old screenshot, new screenshot, old HTML and new HTML
- Users can quickly detect if problem

1.1.3. Link checking

- Link checker

1.1.4. Screen scraping

- Scraper
Login a fetch data
- Tiki stores credential to third-party site
- Tiki requests that PhantomJS logs in to the site and fetches some data
- Data is added to Tiki (wiki page, tracker, dynamic variable, etc.)
  - Tiki trackers Tabular is a powerful way to get data into trackers.

This could be unattended or on demand, but the user never sees the password to third-party site

1.1.5. Screen capture
- ScreenCapture

Get a screencapture to Annotate (ex: Q.A. on design integration)
See also: Annotations
- User A adds URL to Tiki (optionally with credentials to login)
- Tiki grabs screenshot
- User A adds annotations via https://doc.tiki.org/PluginAnnotation
- User B fixes issues, and responds to annotations
- User B requests a new screenshot

Theme Integration Testing
Get various screenshots at different screen resolutions to test design/theme integration for responsive web design development for specified part of Tiki with different user/group/perspective view.

1.1.6. Convert JS to images
Ex.: maps, d3.js charts, etc.
- For Newsletters and mPDF

Converting dynamic JavaScript content into static assets
https://github.com/astefanutti/decktape#examples
Tiki Slideshow used in BigBlueButton

1.1.7. Password Management
Access password-protected data without having the password.
Ex: credentials for access to a service like UPS or PayPal. You want select users to be able to get info but not have the password (ex. you want to avoid that they have the possibility to change data)

Can we imagine PhantomJS as being a proxy browser where we could enhance security?

By using User Encryption we can insure password is not stored in plain text in the Tiki DB. (Ask Marc about notes on KeePassPHP)
1.1.8. Collaborative watch

Tiki has

- Article Generator to integrate data from RSS feeds
- Integrator
- PluginSnarf

but none of these can properly deal with logins, and JavaScript.

See also: https://profiles.tiki.org/Collaborative_Watch

1.1.9. Unattended Upgrades Even for FTP-only Users

As some 1-click installers (third-party) do, we could automate Installation / Upgrades where the headless browser would go through our Tiki Installer steps to install / upgrade Tiki or even handle some Backups (exports, dumps, etc.)?

Related links

- https://github.com/ebrehault/resurrectio
- https://github.com/facebook/php-webdriver
- PhantomJS
- CasperJS